

# DØ Status and Progress Dec 17, 2001 – Jan 7, 2002

- ? Reasonably smooth operations during the last few weeks
- ? Not many changes in functionality due to the holidays – concentrated on data taking

	Integrated Luminosity	Live	Live fraction	Rate to tape
17 Dec – 23 Dec	1.03 pb-1	365 nb-1	35.3%	6.9 Hz
24-Dec – 30 Dec	1.02 pb-1	407 nb-1	39.8%	5.7 Hz
31-Dec – 7-Jan	1.36 pb-1	669 nb-1	49.3%	6.2 Hz
Total	3.41 pb-1	1.44 pb-1	42.2%	





### **SMT Status**

### ? **SMT**

- ∠ 3 power supplies off, ~1/3 off on another supply
- ~ 50% of channels under power
- Operational fix attempted caused 'latch-up' conditions of op-amps – too much current draw (backpowering of 5V and 15V due to op-amp and comparator circuits)
- Noise input on Vcal not fixed by Schottky diode on sequencer boards
- Hampered by limited ability to test for causes and solutions outside of the real detector environment
- Access later this week to address all these problems





## **DØ Status**

#### ? Calorimeter

- Running very smoothly
- **∠** Problem with 2 supplies in platform − replaced
- **∠** One supply in counting house (12/25) repaired

#### ? Muon

- Running very smoothly
- One supply fixed during access

#### ? CFT

- 118 Class A AFE boards through Phase 5 testing
- **∠** 101 AFE boards installed on platform
- Improved understanding of temperature and bias control issues
  - ∠ Reduced latch-up conditions to ~ 1%/day
- **∠** Improved air cooling on platform during accesses
- Upgrades to AFE power supplies controls tested and ready for installation
- Board repair in progress
- Reconstructed tracks in the axial view



# **DAQ System**

### ? **L3 DAQ**

- Final production VBDi installed testing
- Waiting on SIBs for final VRCs
- Still seeing frequent resets and event loss due to parity errors
- VBDi's being tested in test stand at board house with full readout DAQ
- Firmware downloadable locally speeds up testing and integration
- Short term goal (2 weeks) have 3 VRCs running smoothly at Dzero
- February time scale for SIB + 4 more VBDi's

### ? L2 Trigger

Been testing in global runs for last few weeks





## **Access Plans for 01/09-01/10**

### ? Wednesday 01/09

- ∠ 04:00 Dump beam
- ∠ 04:30 Supervised Access
- ∠ 04:30-10:00 Open EF South and CF

## ? **Thursday 01/10**

- ∠ 12:00-18:00 Close CF and EF South
- - **∠** CF bottom B-layer PDT recheck
  - **EF N/S elevation**
- 22:00 Search and Secure





# Cathedral Work during Access

### ? SMT

- Suspect 3 bad power supplies
  - ∠ NW1 bad VCC1 (swap)
  - ∠ SW1 bad VCC3 (repair)
  - ∠ SW0 bad VCC3 (swap)
  - ∠ NE1 bad 15V (probably fuse)
- ∠ Replace all 15V fuses (5A ∠ 7.5A) test and adjust trip levels (6A)
- Individual resistive fuses on some Interface Boards (3)

#### ? Calorimeter

- Replace a secondary power supply for preamplifiers
- Fix a few bad channels
- Fix a few bad temperature probes

#### ? Muon

Fix readout for two PDT layers





## Other Work during Access

### ? CFT

- Install modified boards for one crate to address latch-up problems modified resistors, capacitors and firmware
- Install new firmware for the AFE power supply controllers - improve reliability and allow independent control of power supplies to each half of AFE crates
- Investigate link timing out of the AFE boards and into the mixers

